

Clinical Algorithm for Congenital Hypothyroidism Abnormal Screen Result

ABNORMAL screen result for
CONGENITAL HYPOTHYROIDISM

Abnormal screen result
TSH >50mIU/L

Immediately measure
serum fT4, TSH

AND

Immediately initiate
therapy L-thyroxine
(10-15mcg/kg QD)

AND

consider discussing the
value of an urgent
thyroid uptake scan
with local Pediatric
Endocrinology

Elevated TSH

Aim to normalize fT4
within two weeks and
normalize TSH within
one month

Borderline screen result
TSH 25 – 50 mIU/L

Repeat screen

If repeat borderline
screen result **TSH 25 –
50 mIU/L**

Immediately measure
serum fT4, TSH

If TSH is elevated after
receipt of the serum
TSH result, initiate
therapy L-thyroxine (10-
15 mcg/kg QD)

MEDICATION

Initial Starting Dose:

L-thyroxine 10-15 mcg/kg PO once daily

Give as tablet or crush the tablet on a
spoon and give with a few milliliters of
breast milk or water

- Do not dispense from pharmacies as a suspension; always dispense in tablet form
- Do not administer with soy, fiber or iron

Titrate dose based on fT4 and TSH.

MONITORING

Aim for fT4 in the upper limit of the normal range for age and a TSH in the low - normal range (0.5 to 2 mIU/L). Once fT4 and TSH are normalized, monitor primarily with TSH.

Follow serum fT4 and TSH

- At 2 and 4 weeks after initial treatment started
- q1-2 months for 6 months
- q3-4 months between 6 months and 3 years of age
- q6-12 months from 3 years until end of growth
- 4 weeks after any dose change

Clinical examination, including **assessment of growth and development**

- q2-3 months until 3 years of age

References:

1. American Academy of Pediatrics, American Thyroid Association, and Lawson Wilkins Pediatric Endocrine Society. Update of Newborn Screening and Therapy for Congenital Hypothyroidism. Pediatrics 2006; 117:2290-2303.

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